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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,561	12/17/2003	Tomoyuki Ohzeki	FS-F03218-01	4508

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EXAMINER

CHEA, THORL

ART UNIT PAPER NUMBER

1752

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/736,561

Applicant(s)

OHZEKI ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12172003:3292004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7, 17, 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The compound of formula (2) in claim 7 is indefinite for failing to define as to what "S" is. The language "becomes minimum density plus 0.5" is indefinite because the term "minum density" is relative and vague.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 10, 14-15, 17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499).

Reeve discloses a photothermographic material substantially as claimed. See for instance the material in column 25, claim 23 wherein the photothermographic material having at least 70 % of the projected area of the photographic silver halide grain having average diameter within the range about 0.30 to about 0.45 micron, an average thickness within the range of 0.04 to 0.05 microns and aspect ratio within the range of 5:1 to 15:1, an organic silver salt oxidizing agent comprising silver behenate, phenolic reducing agent and binder; the silver iodobromide in

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column 6, lines 1-22 which contains 40 mole percent iodide and 60 mole percent bromide, and the phthalic acid as toner in column 18, lines 10-15.

Reeves may not exemplify the use of the silver halide having iodide content of 40 mole % to 100 mole % having an average sphere-equivalent diameter in the range of 0.3 micron to 5.0 microns, but suggest the average diameter from 0.30 to 0.45 micron, and the silver iodide content of 40 mole %. Therefore, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the silver iodobromide grains having iodide content and average diameter suggested in Reeves with a reasonable expectation of achieving a photothermographic material with increased photographic speed, increased maximum density and improved developed image tone. The claimed limitation in claim 17, 19-20 is related to the process of forming an image and fails to further limit the composition of the claimed photothermographic material. The development accelerator in claim 14 is within the scope of toning agent or speed-increasing compound taught in Reeves in column 18, lines 8-26.

3. Claims 9, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499). as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of EP 1310825A1 (EP'825). The teaching of Reeves is as shown in the above paragraph. EP'825 discloses use of silver halide having iodide content from 10 mol % to 100 mole % on page 30, [0082]; and a dye having absorption maximum in a wavelength range 350 nm to 430 nm in the abstract.

4. Claims 5-6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Nishimura (US Patent No. 5,965,343).

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The teaching of Reeves is as disclosed in the paragraph 2 above. Nishimura discloses silver bromiodide grains having dislocation lines thereon. See column 8, lines 31-51. The silver halide grains provide a photographic material with high sensitivity and less fluctuations in properties due to mechanical stress. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use silver iodobromide having dislocation thereon to provide the photothermographic material taught in Reeves high sensitivity and less fluctuations in properties due to mechanical stress, and thereby provide a material as claimed.

5. Claims 2-3, 7, 16, 17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Zou et al (US Patent No. 6,576,410).

Zou et al a X-ray photothermographic material wherein both side of a support are provided with imaging layer; the use X-ray intensifying screen to expose the material and a compound having structure within the scope of claim 7. See abstract, compound in columns 28-37, T-1 to T-59; and column 14, compound RS-1 and column 15, RS-1a, RS-1b. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the toner taught and sensitizer to improve the toning property in combination with the coating of the imaging layer on both side of the support to form an X-ray photothermographic material in the use of X-ray intensifying screen, and thereby provide a material as claimed.

6. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Goto et al (US Patent No. 6,787,298). The compound of formula (I) in claim 12 and claim 13 has been known in Goto et al. See compound in columns 27-52, compound I-58, and

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column 13, lines 1-45. These compound provide a photothermographic material with higher sensitivity. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the compound taught in Goto et al to increase the sensitivity of the material of Reeves, and thereby provide a material as claimed.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *th*  
March 2, 2005

*Thorl Chea*  
Thorl Chea  
Primary Examiner  
Art Unit 1752